AREAL GEOLOGY

STATE OF NEW JERSEY

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NEW JERSEY
RARITAN QUADRANGLE

LEGEND
(continued)

METAMORPHIC ROCKS OF UNKNOWN ORIGIN
(Areas of metamorphic rocks of unknown origin are shown by hachures.)

PRE-CAMBRIAN

- pgn — **Pochuck gneiss** *(dark gneisses composed of pyroxene, hornblende, oligoclase, and magnetite, partly igneous in origin.)*
- gs — **Graphite schist** *(including garnetiferous graphite schist and mica-graphite schist.)*
- fnk — **Formation not known** *(deeply covered by drift)*

Note: *In areas deeply covered by drift the patterns are subdued by an overprinted color and the boundaries are dotted. The Quaternary deposits are represented on the surficial geology map.*

Faults

Concealed faults *(covered by younger deposits)*

LEGEND

SEDIMENTARY ROCKS
(Areas of subaqueous deposits are shown by patterns of parallel lines; metamorphism is indicated by hachures combined with the line patterns.)

Newark group — TRIASSIC

- Rb — **Brunswick shale** *(soft red shale with few beds of sandstone)*
- Rl — **Lockatong formation** *(dark argillite and fine-grained slabby sandstone)*
- Rs — **Stockton formation** *(gray sandstone, arkose, and red shale)*
- Rc — **Conglomerates in the Brunswick, Lockatong, and Stockton formations**

UNCONFORMITY

DEVONIAN

- Dc — **Cornwall ("Pequanac") shale** *(black fissile shale and slate)*
- Dk — **Kanouse sandstone** *(light-colored sandstone, or quartzite)*

SILURIAN

- Sd — **Decker limestone** *(dark-gray impure limestone)*
- Sl — **Longwood shale** *(red shale)*
- Sgp — **Green Pond conglomerate** *(conglomerate and quartzite)*

UNCONFORMITY

ORDOVICIAN

- Om — **Martinsburg shale** *(shale, slate, and sandstone)*
- Oj — **Jacksonburg limestone** *(dark-blue or black massive and shaly limestone, with conglomerate at base)*

UNCONFORMITY

CAMBRIAN

- €Ok — **Kittatinny limestone** *(blue limestone, often magnesian, with occasional cherty layers)*
- €h — **Hardyston quartzite** *(vitreous, ferruginous, calcareous quartzite, in part feldspathic)*

UNCONFORMITY

PRE-CAMBRIAN

Metamorphic

- fr — **Franklin limestone** *(white and mottled marble, containing pyroxene, chondrodite, and serpentine; in places includes slaty rocks resembling sheared volcanics)*

IGNEOUS ROCKS
(Areas of igneous rocks are shown by patterns of triangles and rhombs)

TRIASSIC

- Trdb — **Diabase** *(sheets and basaltic dikes intrusive in the Newark group)*

Included in Newark group

- Trw — **Watchung basalt** *(three successive lava flows interbedded in the Brunswick shale)*

PRE-CAMBRIAN

- bgn — **Byram gneiss** *(gray granitoid gneiss composed of microcline, microperthite, quartz, and hornblende, with a little pyroxene and biotite)*
- lgn — **Losee gneiss** *(white granitoid gneiss, composed of quartz, oligoclase, pyroxene, and some hornblende and biotite)*

Legend is continued on the left margin.

Henry Gannett, Chief Topographer.
George H. Cook, Geographer in charge.
Triangulation by U.S. Coast and Geodetic Survey and C.C. Vermeule.
Topography by Geological Survey of New Jersey.
Surveyed in 1881-86.
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APPROXIMATE MEAN DECLINATION 1902.

Scale 1/125000

1 ½ 0 1 2 3 4 5 Miles

1 ½ 0 1 2 3 4 5 Kilometers

Contour interval 20 feet.

Datum is mean sea level.

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Pre-Cambrian geology by W.S. Bayley.
Paleozoic geology by H.B. Kümmel and Stuart Weller.
Triassic geology by H.B. Kümmel.
Surveyed in 1895 to 1909.

SURVEYED IN COOPERATION WITH THE STATE OF NEW JERSEY.